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RACE TO THE BOTTOM IN INTERNATIONAL TAX COMPETITION: SOME CONCEPTUAL ISSUES

ABSTRACT. The purpose of the article is to provide analysis of conceptual background of the international tax competition, and its negative externality – the race to the bottom situation. We distinguished the three types of tax competition models, notably, traditional, asymmetric and Leviathan models. Also we analyzed briefly the main benefits and disadvantages of international tax competition in the modern world. Using both comparative and graphical analysis we provide a brief evaluation of the dynamics of statutory corporate income tax rates in countries worldwide. For the purpose of such analysis we distinguished the four regions: Europe, Latin America, Africa and countries of the former USSR. We used panel data on statutory corporate income tax rates for 70 countries for the period of 2006–2015. We found that in the three regions, notably Europe, Latin America and countries of the former USSR there were no significant changes in statutory corporate income tax rates while in African countries they have changed substantially. This can be explained by the weakness of these tax systems, i.e. the countries compete with each other, primarily by reducing statutory tax rates. But in order to make some conclusions both about taxation of corporate income and possibility of the race-to-bottom situation occurrence in neighboring countries, the real tax rates, taking into account the tax incentives and eliminations should be considered in future research. The obtained results could be useful for the elaboration of guidelines in order to create an attractive investment climate both for domestic and non-resident investors.

KEYWORDS. International taxation; tax competition; investment; corporate income tax; race to the bottom; cross-country analysis.

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«ГОНКА УСТУПОК» В МЕЖДУНАРОДНОЙ НАЛОГОВОЙ КОНКУРЕНЦИИ

АННОТАЦИЯ. Цель статьи заключается в рассмотрении концептуальных положений международной налоговой конкуренции и негативной экстерналии этого явления – «гонки уступок». Определено три типа моделей налоговой конкуренции, в частности, традиционные, ассиметричные и модели Левиафана. Также представлен краткий анализ основных преимуществ и недостатков международной налоговой конкуренции в современных условиях. Используя методы сравнительного и графического анализа, представлена краткая оценка динамики номинальных ставок налога на доход корпораций в странах мира. Для целей анализа было выделено четыре региона: Европа, Латинская Америка, Африка и страны бывшего СССР и использованы данные по 70 странам мира за период 2006–2015 гг. Анализ показал, что в трех регионах мира (Европа, Латинская Америка и страны бывшего СССР) значительных изменений номинальных ставок налога на доход корпораций не происходило, тогда как в стра-

нах Африки наблюдались существенные трансформации этого показателя. Это можно объяснить слабостью налоговых систем этих стран, которая проявляется в том, что государства конкурируют друг с другом, прежде всего, за счет сокращения номинальных ставок налогов. Однако для того, чтобы сделать выводы относительно налогообложения дохода корпораций и возможности возникновения «гонки уступок» в соседствующих странах, последующие исследования предполагают анализ реальных ставок налогов, которые учитывают предоставленные налоговые льготы. Полученные результаты могут быть использованы при разработке рекомендаций, направленных на создание благоприятного инвестиционного климата как для инвесторов-резидентов, так и нерезидентов.

КЛЮЧЕВЫЕ СЛОВА. Международное налогообложение; налоговая конкуренция; инвестиции; налог на доход корпораций; «гонка уступок»; межстрановой анализ.

Introduction

Over the last years under the conditions of globalization corporate income tax became a powerful policy instrument in the states' competition that serves to attract foreign capital. Consequently, one of the main features of modern economic systems, caused by globalization processes, is the international tax competition. The independent states inevitably should accept decisions on both the tax structure and level of taxes. The net effect is the difference in the tax burden creates the competitive economic climate for internationally mobile factors of production, capital and labor. The international tax competition could give a substantial incentive both to improve the efficiency of tax systems in countries worldwide and to increase foreign direct investment (FDI) on a global scale. The simplest, and consequently, the most popular way of international tax competition is the provision of tax incentives; the reduction of capital income tax rate is often regarded as an efficient tool for attracting investment. But if such a competition leads to negative tax externalities (arising primarily from capital movement), this refers to harmful tax competition and also the race-to-the-bottom situation, which appears when states compete with each other, principally, for the investment capital, by lightening gradually the statutory and regulatory structure. Under current conditions an important aspect, especially for small developing countries, is to create an attractive investment climate both for domestic and non-resident investors. The system of capital taxation therefore should be organized

in such a manner as to prevent the outflow of mobile factors to the jurisdictions with lower taxation; at the same time, the actual tax regime should be attractive for FDI. The attraction into country's economy the resources of profitable multinational companies creates problems of avoiding of shifting the tax base of corporate income tax outside the country.

In order to be able to elaborate some practical conclusions aimed at improving the country's tax policy in the area of capital income taxation it is expedient to consider conceptual issues concerning international tax competition and its externality — the race to the bottom situation.

So, the purpose of the paper is to provide analysis of conceptual background of the international tax competition and the race to the bottom situation. It will also focus on brief analysis of the dynamics of statutory corporate income tax rates in countries worldwide. To do this we structured the paper as follows. Section 2 reviews theoretical and empirical research on the international tax competition and race to the bottom. Section 3 provides brief theoretical background of tax competition, its benefits and disadvantages. Section 4 analyzes the dynamics of capital income tax rates in economics of the world. Finally, Section 5 presents some concluding remarks.

Literature review

Some part of research studies the theoretical aspects of international tax competition under conditions of globalization.

Rudra (2008) in her book «Globalization and the Race to the Bottom in Devel-

oping Countries: Who Really Gets Hurt?» studied the interactions between globalization and the race to the bottom, domestic politics, and welfare strategies in developing countries, focusing on the impact of the expansion of the international market on the welfare policies of least-developed countries. She argued that for developing countries, unlike the developed ones, globalization is not the main reason of occurrence the race to the bottom situation occurrence [1].

The Report of the Tax Justice Network (2012) showed that governments in East African countries provide a wide range of tax incentives, such as tax holidays, notably in export processing zones (EPZs), and reduced standard rates, notably, import duties and VAT in order to attract foreign direct investment. This study, focusing on Kenya, Uganda, Tanzania and Rwanda, concluded that such tax benefits promote harmful tax competition, which leads to the race to the bottom in the region, and they are not needed to attract FDI [2].

Keen & Konrad (2013) provided a survey of the theory of international tax competition and factors, which determine countries' decisions in the area of their tax policy in an international context [3].

Olney (2013) tested the hypothesis that globalization could lead to a race to the bottom situation. Notably, when multinational companies invest in economies with lower regulatory standards; simultaneously these countries continue to undercut such standards in order to attract foreign direct investment. With two assumptions (multinational companies increase FDI in response to reductions in employment protection rules in the host country and economies undercut their labor standards in order to attract foreign capital). As a result he found that the employment protection rules could have a significant negative impact on foreign direct investment and the degree of such an impact depends on the type of FDI. Also he discovered a significant positive impact of labor standards on the employment protection rules, implemented in the host country. Therefore, Olney concluded that multinational companies invest pri-

marily in countries with lower regulatory standards, promoting therefore a race to the bottom, and, consequently, whether a race to the bottom is an intended effect depends on the employment protection rules [4].

Anguelov (2015) estimated the impact of change of marginal corporate tax rates on FDI and GDP. For this he used a multiple regression analyses of several economic indicators, notably, multinational companies' mergers and acquisitions, trade bloc membership and multinational companies' incorporation for the period 1999–2009 for 60 countries worldwide. The author found that reduction of corporate tax rates could lead to the increase of FDI but at the same time — to the decrease of annual GDP growth. He concluded that the tax competition could attract the foreign direct investment, but may not contribute to the economic growth; when both the trade integration and ease of merger and acquisitions increase, the trend in harmonizing tax rates decreases [5].

Another set of papers provides an empirical estimation of the impact of changes of corporate income tax rates on different macroeconomic indicators.

Bretschger & Hettich (2005) using the panel data of 12 OECD countries for the period 1967–1996 argued that globalization had a negative impact on capital income taxes. Thus, they found an evidence of the efficiency hypothesis of globalization in the tax competition theory, according to which the reduction of taxes on mobile factors as opposed to immobile ones is more efficient for governments [6].

Devereux et al. (2008) analyzed the possible tax competition in OECD countries over corporate taxes. They developed a model in which multinational companies could choose their capital stock in response to an effective marginal tax rate, and simultaneously could choose the location of their profit according to different statutory tax rates. The authors tested the model using data from 21 countries for the period 1982–1999 and found evidence that analyzed countries compete over both mentioned measures and they interact strategically only between open economies [7].

Yao & Zhang (2008) estimated both the patterns and extent of strategic tax competition between geographically neighboring governments in China. Using a set of panel data at the county level and applying the local indicator of spatial association (LISA) approach they statistically tested the existence of local capital tax competition and also analyzed its determining factors. The authors found heterogeneous tax competition behavior across country's regions, where local governments compete with each other in order to attract mobile capital, lowering tax rates and creating thereby the race to the bottom situation [8].

Ali Abbas et al. (2012) analyzed the impact of corporate income tax regimes in 50 emerging and developing countries over 1996–2007 on both corporate tax revenue and domestic and foreign investment. They estimated effective tax rates taking into account the special tax regimes like tax holidays, reduced rates and investment allowances. The authors found evidence of a partial race to the bottom, notably, no race to the bottom situation for standard tax systems in the sample compared to advanced economies (except the sub-Saharan Africa) and the presence of race to the bottom for special tax regimes, where effective tax rates are close to zero, especially in the case of African countries. Also their regression analysis showed that higher tax rates adversely affect both domestic investment and FDI, but do increase revenue in the short-run [9].

Vezina (2014) provided an empirical assessment of race-to-the-bottom unilateralism. He suggested that decades of unilateral tariff cutting (in order to obtain marginal locational advantages) in emerging economies of Asia have been induced, at least in part, by a competition aimed to attract FDI from Japan. Using spatial econometrics, the author showed that tariffs on parts and components, which could be considered as a crucial locational determinant for Japanese firms, followed those of competing economies if the latter were lower, if the motivation to obtain FDI was high, and when competing countries had the similar level of development [10].

The research providing an empirical assessment in order to make conclusion of presence of race to the bottom situation is generally carried out for appropriate regions, where the possibility of its occurrence is high. Typically this is true for the European Union countries.

Krogstrup (2004) analyzed corporate tax rates in European Union countries in order to define whether there is a race to the bottom in corporate tax burden. She found that the tax competition impact on the corporate tax burden exists but it has a relatively small magnitude and could not be qualified as a race to the bottom. Also Krogstrup (2004) suggested that many other factors like agglomeration economies influence significantly on the corporate tax burden and could provide the counterweight to tax competition effects [11].

Mendoza & Tesar (2005) estimated quantitatively the key features of tax competition in open economies in a two-country version with neoclassical balanced-growth model. Further, they introduced some modifications, notably the possibility for the countries to differ as a net debtor and as a net creditor in the pre-tax-competition equilibrium, the inelastic labor and lower capital adjustment costs. They found that both faster transitional dynamics and asymmetries between net creditors and debtors could increase the benefits of tax coordination. These results allowed them to conclude that economies with relatively inefficient tax systems could lose significantly in welfare if they compete by corporate income taxes against states with relatively efficient tax systems. Consequently, the harmonization of indirect taxation could be regarded as undesirable since it induces countries to respond to the negative impact of tax competition on tax revenue by raising the distorting taxes on labor income [12].

Nicodème (2006) analyzed the information about corporate income tax coordination in European countries. He found that despite a substantial decline of the statutory income tax, the revenue collected from corporate taxation remained relatively stable; and he concluded that there

is no evidence of a race-to-the-bottom situation in EU member countries [13].

Fourçans & Warin (2006) analyzed the question of the likelihood of occurrence of a race to the bottom situation, as a result of tax competition between countries, in a monetary union, like the Eurozone. In order to analyze the conditions of a race to the bottom they applied a two-stage game model describing a bargaining situation between countries with costs of changing tax policies. The authors concluded that the tax competition is not a reason of appearance of a race to the bottom between European countries. Also they showed that if revoking costs do exist, tax harmonization policies could not be regarded as useful if based upon concerns about race to the bottom [14].

Devereux & Loretz (2013) analyzed a tax competition in source-based corporate income taxes and classified an appropriate empirical literature, by highlighting the importance of the measurement of both tax rates and openness. They found that tax competition could take many forms and they concluded that there is evidence for tax competition mostly in the European Union countries [15].

Dvořáková (2013) analyzed the tax competition in EU countries in order to determine whether the race to the bottom is real in the European Union. She used a regression analysis for the 1998–2010 on a sample of 27 Member States. The author found that there is no race to the bottom in all EU states, while such trends were detected only in the EU-12 group of new member countries. Taking into account that there is a considerable statistical dependence between the revenue from corporate income tax and the economic cycle, she supposed that the theory of the race to the bottom could be in phase with other factors in economy, notably if the economic growth could be observed in some countries, then the reduction of tax rates to a certain minimum threshold will not have a negative impact on revenue from corporate income tax [16].

Baskaran & Fonseca (2014) analyzed both theoretical and empirical literature on local and international tax competi-

tion. Notably they discussed whether EU states should harmonize their tax policies and whether intergovernmental transfers could be an effective tool in order to prevent a race to the bottom. The authors supposed that the tax competition did not have a negative impact on the tax revenue and they argued that the tax coordination was not necessary in order to prevent low levels of taxation in the EU countries. Baskaran & Fonseca (2014) concluded that now the case for substantial tax coordination in the EU countries is rather weak [17].

Azémar et al. (2015) using data from 27 European Union countries for the period 1981–2005, developed an analytical model of regional trade and investment where countries could be differed from each other by the size of domestic markets. They found that large countries apply higher corporate tax rates than their smaller competitors for FDI; market size also plays an important role: larger markets are less responsive to corporate tax rates changes [18].

Theoretical background

The tax competition could be regarded as the use of low tax rates by governments in order to attract additional productive resource (primarily capital and labor) to their countries.

Teather (2005) determined a two-stage effect of international tax competition on the world's tax systems:

- some pioneer countries would reduce their tax rates in order to offer low effective tax rates for potential investors;
- other countries could lower their own taxes to compensate expected or actual losses occurred from this competition [19].

In order to understand the nature of international tax competition let's consider the main theories of tax competition, developed in recent economic and tax literature.

The provided analysis allowed us to underline the three types of tax competition models: traditional, asymmetric and Leviathan models.

The first attempt to understand the problem of tax competition on the local level was made by Oates (1972), who con-

sidered that «The result of tax competition may well be a tendency toward less than efficient level of output of local services. In an attempt to keep taxes low to attract business investment, local officials may hold spending below those levels for which marginal benefits equal marginal costs, particularly for those programs that do not offer direct benefit to local business» [20, p. 143].

Further Zodrow and Mieszkowski (1986) presented a formalized basic tax competition model with a national system of competing local governments in order to show how the use of a distorting property tax on mobile capital could reduce the level of residential public services. The main conclusion derived from their model is that the mobility of capital could lead to the both non-optimal low capital taxation and under-provision of public goods [21, p. 2; 22].

Wilson (1999) noted that this view runs counter to the «Tiebout Hypothesis» [23, p. 270]. According to this hypothesis the competition between local governments for mobile households could improve the total social welfare. Tiebout (1956) concluded that if consumers were fully mobile, the appropriate local governments with definite patterns of revenue and expenditure would be adopted by the consumers [24, p. 424].

If some households want to have well-financed public goods, they could choose to pay higher property taxes. Otherwise, they could move to a territory with lower taxes and more efficient public services. Thus, the competition among governments tends to encourage both efficient production and provision of public services, which satisfy the consumers' demands. Consequently, the level of taxes established in certain jurisdiction reflects the results of tax competition. According to Edwards & de Rugy (2002), Tiebout's theory focuses on local governments but under current conditions of globalization, national governments become similar to local ones since they compete for investors- taxpayers across national borders [25, p. 14].

In 1988 Wildasin modified the Zodrow-Mieszkowski model, by including a

finite number of countries that, in turn, could have an impact on the after-tax return to capital. But despite this assumption, the results were the similar, i.e. taxes were still found to be low and suboptimal, but there were some quantitative differences [21, p. 6; 26].

Janeba & Schjelderup (2002), providing a review of the tax competition literature, considered the main restrictions which could effect on the conclusions of both Zodrow-Mieszkowski and Wildasin models of tax competition. Notably they distinguished variable supply of capital, multiple tax instruments, foreign ownership, double taxation, public input goods, public goods spillover effects, large regions, etc. [27].

In order to eliminate in some degree these limitations a set of asymmetric models of tax competition was developed (see for example, Bucovetsky (1991) [28], Keen & Kanbur (1993) [29], Krogstrup (2002) [21], Wilson (1991) [23]).

These models consider a proposition that market share of certain jurisdiction is inversely related both to its tax rate and allocative efficiency [30, p. 20].

But their conclusions were similar to the precedent models: the larger country would face a lower elasticity of capital to the tax rate, and consequently a lower marginal cost of public funds, and accordingly would choose a higher tax rate as compared to the smaller country [21, p. 8].

The separate group of models which considers the interaction between tax competition and welfare are the Leviathan models (see for example Edwards & Keen (1996) [31]), based on the ideas of Brennan and Buchanan (1980) [32]. In Leviathan models the government's goal is either to maximize the size of the state (i.e. the tax revenue) or its own consumption or utility. Notably in Edwards & Keen model the government concerns about maximizing the size of the public sector [23, p. 1073].

According to Krogstrup (2002) the main differences between the conclusions of Leviathan models and both «traditional» and asymmetric tax competition models are normative. She noted that «both types of models predict a fall in the tax

rate due to an increase in capital mobility, but in the Leviathan model, this fall enhances efficiency by constraining a tendency to spend too much and too wastefully, while if the government is benevolent, the downward pressure on the rate will lead to a sub-optimally low provision of public goods» [21, pp. 14–15].

Economic theory predicts that international tax competition could help to keep tax rates closer to their optimal level in order to constrain excessive government surplus. The more mobile will be both capital and labor, the more competitive pressure will exist [24].

To some detail, these benefits could be described as follows.

Positive impact on markets, since the lower taxes mean the greater wealth. Notably the lower taxes, particularly on mobile investment capital, have the beneficial impact on savings rates, encourage savings.

Positive impact on global capital markets. The widespread opinion is that tax heavens could lead to significant distortions in the global capital market by attracting disproportionate amounts of investment to these jurisdictions.

But according to the Teather (2005), tax havens could be regarded as an important instrument in the global capital market, which is characterized by imperfect system of avoiding of double taxation. Tax heavens thereby make international capital markets more efficient, by increasing the available international investment capital, and creating possibility to invest it into the high profit companies, without distortions induced by the need to prevent double taxation.

Positive impact on business. Jurisdictions with lower level of tax burden give to investors a possibility to choose where to invest their capital. This is of particular interest for developing countries which often do not have enough domestic capital and thus should rely on the foreign one.

Positive impact on government. This could be considered both from the positions of restraints and efficiency.

The tax competition could have positive impact on the government since the former induces government to produce

public goods and to provide public services more effectively, since under absence of competition monopolists have fewer incentives to be efficient and to provide necessary public goods and services.

The positive impact from the point of view of efficiency means that under competition framework, governments face the restricted ability to increase revenue by raising the level of tax burden [19, pp. 26–35].

But the opponents of the tax competition argue, in turn, that it will have little impact on actual investment allocation decisions and thus the efficiency gains from such competition are minimum at best and these efficiency gains are outbalanced by the social losses occurred as a result of reduced tax revenue or sub-optimal tax measures aimed at prevention of tax revenue decrease (see for example Avi-Yonan (2000) [33], Roin (2000) [34]).

But according to OECD (1998), the tax competition policies, notably tax heavens, could lead to substantial negative practical consequences:

- distorting of capital and investment flows;
- violating the integrity and fairness of the tax system;
- discouraging compliance by taxpayers;
- shifting the tax burden towards less mobile factors of production;
- increasing the cost of tax administration and compliance both for taxpayers and tax authorities [35, p. 24; 36, p. 16].

From the point of view of the regulatory standards Drezner (2006) determined three main predictions of occurrence of the race to the bottom situation.

First, countries that are more open to foreign trade and FDI should have fewer regulations affecting the costs of production.

Second, he considered a strong negative correlation between inward capital flows and the rigidity of regulatory standards in the country, since the multinational corporations in order to maximize their profit would locate in areas with minimum costs of production. Third, when one government lowers its regula-

tory standards in order to attract more investment, other open economies, especially neighboring countries, will follow it. And according to the theory of the race to the bottom, states will have no choice but to lower their standards; otherwise they will face capital outflow [37, pp. 5–6].

The decision of the one state to reduce the corporate income tax rates by using tax incentives leads to certain fiscal externalities for other jurisdictions. Sokolovska (2014) distinguished the following fiscal externalities.

1. The shifting of factors of production into the jurisdictions with low level of tax burden, which leads to erosion of the tax base from jurisdictions with higher level of taxes. Even if the latter provides public services with higher quality in a whole, the additional expenditure could be incurred by those sectors, in which the voters, but not the investors, are interested (for example, the social services). In such a case the difference in services will not compensate the higher tax rate for the companies. This is called the «horizontal externality». It includes also the migration between countries with different tax regimes as considered by Razin & Sadka (2013) [38].

2. In case when federal government changes the tax rate it has an impact on the tax base of all sub-sovereigns, which, in turn, induces an appropriate reaction

of each entity, i.e. the vertical externalities [39, p. 1]. According to the Keen & Konrad such externalities could lead to the high tax burden, thereby worsening the position of the federal state compared at the unitary one [3, p. 51].

3. The countries with high level of taxation and providing due to this increasing public services could not reduce the tax rates in order to compete with jurisdictions, providing tax incentives to attract investment (for satisfying the appropriate social needs). In general, such countries with high level of taxation could maintain the necessary level of public services by increasing other taxes, but this policy could lead to the adverse effects and negatively influence of equity and efficiency principles.

4. The companies operating in two or more jurisdictions could choose appropriate taxes by providing the intra-group transactions and by shifting their income into countries with low tax burden. Consequently, the competition induced by levying of low taxes, leads to the losses of fiscal resources both for jurisdictions with high tax burden and for the fiscal system of the union as a whole [40, pp. 88–89].

Taking all above mentioned into account, as intermediate conclusion, we developed a general pattern of race to the bottom and its consequences (Fig. 1).

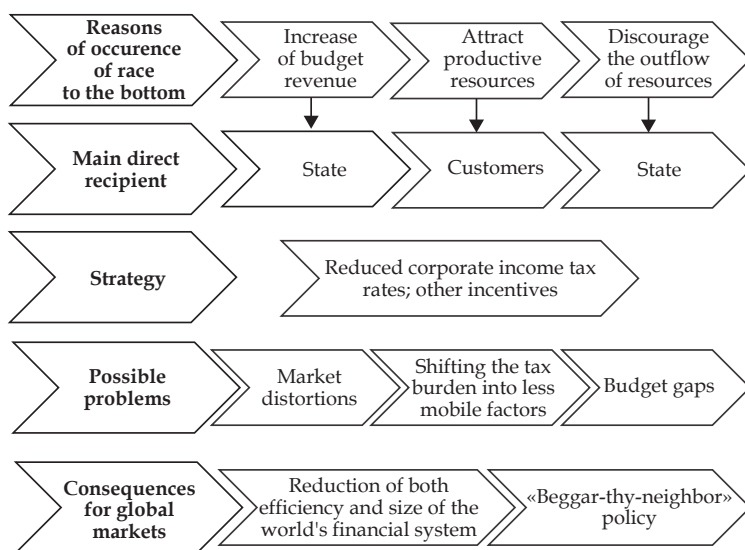


Fig. 1. General pattern of race to the bottom and its consequences

Analytical estimation of the dynamics of statutory corporate income tax rates

Let's briefly analyze the dynamics of statutory corporate income tax rates (STR) in countries worldwide. In order to make some conclusions we divided countries by regions since the tax competition as well as the race to the bottom is typical primarily for the neighboring countries.

So, for our analysis we distinguished four regions: Europe, Latin America, Af-

rica and countries of the former USSR. We used panel data for 70 countries for the period of 2006–2015.

European countries, in turn, were divided into three «sub-regions», according to their geographical location: Northern, Central and Southern Europe.

Fig. 2–4 presents the changes of statutory corporate income tax rates in European countries for 2006–2015.

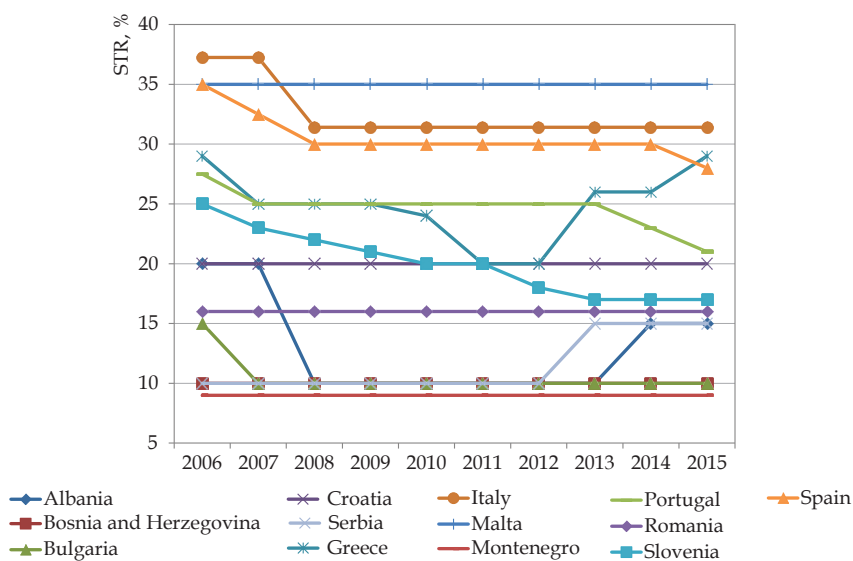


Fig. 2. Statutory corporate income tax rates in Southern Europe

Source: Corporate tax rates table. Available at: <https://home.kpmg.com/xx/en/home/services/tax/tax-tools-and-resources/tax-rates-online/corporate-tax-rates-table.html>

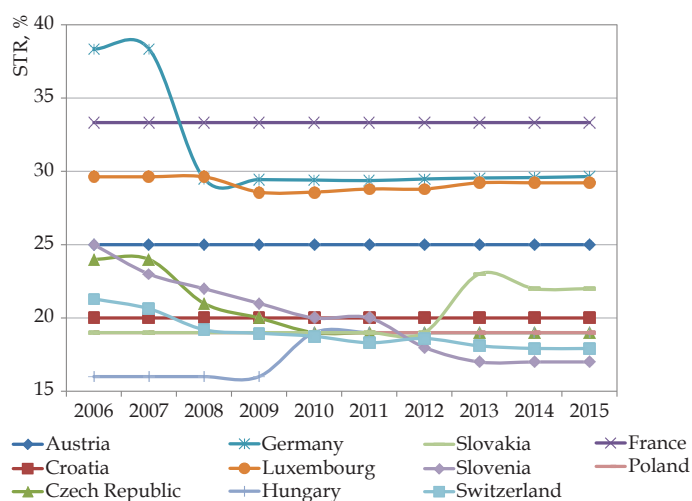


Fig. 3. Statutory corporate income tax rates in Central Europe

Source: Corporate tax rates table. Available at: <https://home.kpmg.com/xx/en/home/services/tax/tax-tools-and-resources/tax-rates-online/corporate-tax-rates-table.html>

In Central Europe there were no significant changes in statutory corporate income tax rates, while in other «sub-regions» starting from 2012 these tax rates were reduced in the United Kingdom, Finland, Denmark, Sweden (Northern Europe) and increased in Albania, Serbia and Greece (Southern Europe).

The possible reason of such differences consists both in the pattern of tax policy and level of development of countries' tax systems, when in order to increase the tax revenue the less developed countries raise the tax rates, while the developed ones reduce the tax burden and simultaneously look for other ways of raising the tax revenue.

Fig. 5 describes the dynamics of nominal corporate income tax rates in countries of Latin America.

The same trend as in Central Europe countries could be observed: there were no significant changes, except Chile and Ecuador with gradual increase and reduction, respectively, of statutory corporate income tax rates. The former country provides an appropriate tax policy in order to compensate the losses of budget revenue occurred due to shift from shareholder taxation on a cash basis to taxation on an accrual basis. Ecuador has an opportunity to reduce statutory income tax rates (in order to attract FDI), since the government receives a significant oil tax revenue.

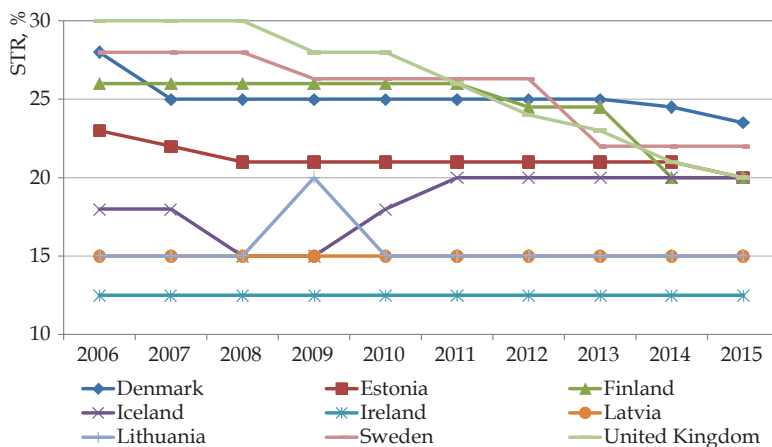


Fig. 4. Statutory corporate income tax rates in Northern Europe

Source: Corporate tax rates table. Available at: <https://home.kpmg.com/xx/en/home/services/tax/tax-tools-and-resources/tax-rates-online/corporate-tax-rates-table.html>

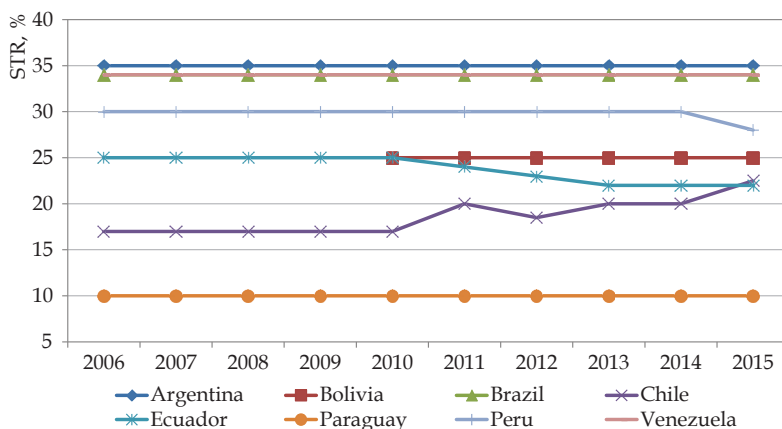


Fig. 5. Statutory corporate income tax rates in Latin America

Source: Corporate tax rates table. Available at: <https://home.kpmg.com/xx/en/home/services/tax/tax-tools-and-resources/tax-rates-online/corporate-tax-rates-table.html>

On Fig. 6 the changes of statutory corporate income tax rates in countries of the former USSR are presented.

Belarus, Ukraine and Uzbekistan, starting from 2010–2011, have gradually reduced statutory income tax rates. The main goal of such tax policy is to stimulate both innovation and investment activity.

The most interesting is the situation with dynamics of nominal corporate income tax rates in African countries (Fig. 7).

In many countries of this region (Angola, Cameroon, Egypt, Libya, Mauritius, South Africa, Zimbabwe) these rates have decreased over the last years, which corresponds to the general trend for the African region.

It can be explained by the fact that tax systems of these countries are weak, and they could compete with each other, primarily by reducing tax rates. Again, this is the region where the simplest tax incentives, like reduced tax rates, tax heavens etc., are the most widespread.

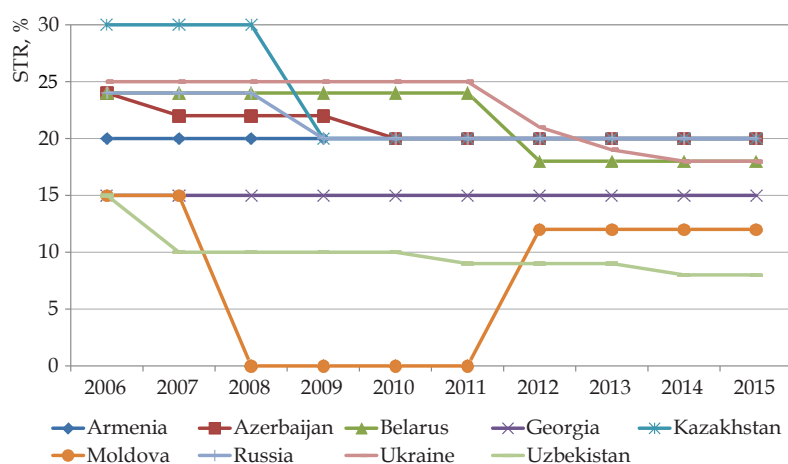


Fig. 6. Statutory corporate income tax rates in countries of the former USSR

Source: Corporate tax rates table. Available at: <https://home.kpmg.com/xx/en/home/services/tax/tax-tools-and-resources/tax-rates-online/corporate-tax-rates-table.html>

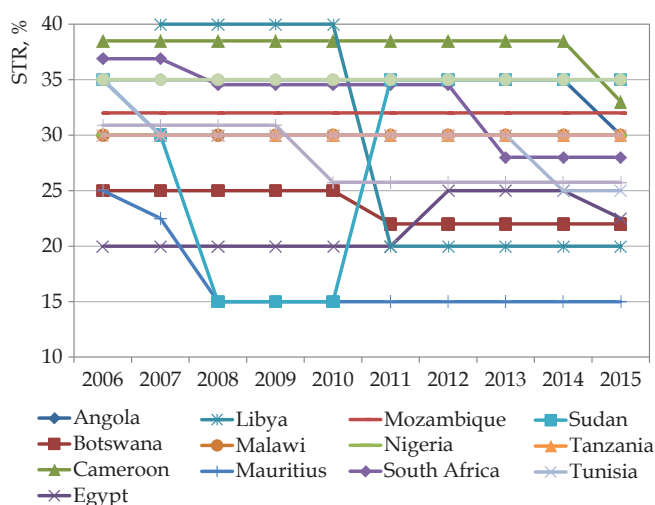


Fig. 7. Statutory corporate income tax rates in African countries

Source: Corporate tax rates table. Available at: <https://home.kpmg.com/xx/en/home/services/tax/tax-tools-and-resources/tax-rates-online/corporate-tax-rates-table.html>

Conclusions

We briefly considered some conceptual issues concerning the international tax completion and the race to the bottom situation as its negative externality. The provided analysis allowed us to determine the three types of tax competition models: traditional, asymmetric and Leviathan models, and their main features.

Using the means of comparative and graphical analysis we provide an evaluation of dynamics of statutory corporate income tax rates in countries worldwide. We discovered that in Europe, Latin America and countries of the former USSR there were no significant changes in statutory corporate income tax rates while in African countries they have changed substantially.

But in order to make some conclusions both about taxation of corporate income

and possibility of presence of the race-to-bottom situation in this region, the real tax rates, taking into account the tax incentives and eliminations should be considered.

This means that one should estimate not only the dynamics of statutory capital income tax rates, but also changes of effective average capital income tax rates (EATR), which measure the effective tax burden of projects that earn more than the capital costs (i.e. projects generating economic rents) and is calculated as the difference between the pre-tax and the post-tax return of the project divided by the pre-tax return, and of effective marginal capital income tax rates (EMTR), measuring the extra tax of a marginal investment project and defined as the difference between the pre-tax and the post-tax return of this project divided by the pre-tax return. Therefore, this will be the direction of future research.

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